

# SEQUENCE LISTING

<110> Johnson, Jeffrey D.  
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Schweitzer, Anthony C.  
Blume, John E.  
Metabolex, Inc.

<120> A Pancreatic Islet Transcription Factor and Uses  
Thereof

<130> 016325-013510US

<140> US 10/533,593

<141> 2005-05-02

<150> US 60/425,968

<151> 2002-11-13

<150> WO PCT/US03/36131

<151> 2003-11-13

<160> 42

<170> PatentIn Ver. 2.1

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3

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<222> (1)..(928)

<223> Xaa = any amino acid

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Xaa Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Glu Xaa Xaa Leu Asn Xaa  
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<222> (1)..(75)

<223> Xaa = any amino acid

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20 25 30



Xaa Lys Leu Glu Pro Xaa Xaa Ala Ala Xaa Phe Gly Lys Xaa Ile Arg  
                   35                                  40                                  45

Xaa Xaa Phe Xaa Xaa Leu Xaa Thr Arg Arg Leu Gly Thr Arg Gly Xaa  
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Ser Lys Tyr His Tyr Tyr Gly Ile Xaa Xaa Lys  
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Asp Xaa Xaa Xaa Asn Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
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Xaa Phe Trp  
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 Phe Xaa Xaa Xaa Leu Xaa Arg Xaa Thr Ser Xaa Xaa His Leu Ala Gln  
   1                  5                  10                  15  
  
 Xaa Ala Arg Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Asn Xaa Met Xaa  
                   20                  25                  30  
  
 Ser Asp Xaa Xaa Arg Val Asp Xaa Asn Xaa Xaa Xaa Xaa Gln Ala Xaa  
           35                  40                  45  
  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
       50                  55                  60  
  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Lys Xaa Xaa Leu Xaa Xaa  
   65                  70                  75                  80  
  
 Xaa Xaa Xaa Xaa Glu Xaa Xaa Xaa Glu Trp Leu Asp Xaa Val Xaa Xaa  
                   85                  90                  95  
  
 Gln Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys  
           100                  105                  110  
  
 Xaa Ala Xaa Xaa Phe Leu Leu Lys Trp Ser Phe Xaa Xaa Xaa Xaa Val  
           115                  120                  125  
  
 Xaa Xaa Xaa Leu Thr Leu Xaa Xaa Ala Xaa Ser Phe Gly Ser Phe His  
   130                  135                  140  
  
 Leu Ile Arg Xaa Leu Xaa Asp Glu Tyr Xaa Xaa Xaa Xaa Xaa Glu Xaa  
  145                  150                  155                  160  
  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu  
           165                  170  
  
  
 <210> 8  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:exemplary RFX  
         DNA binding domain (DBD)  
  
 <400> 8  
 Thr Leu Gln Trp Leu Glu Glu Asn Tyr Ile Val Cys Glu Gly Val Cys  
   1                  5                  10                  15

Leu Pro Arg Cys Ile Leu Tyr Ala His Tyr Leu Asp Phe Cys Arg Lys  
                   20                  25                  30  
 Glu Lys Leu Glu Pro Ala Cys Ala Ala Thr Phe Gly Lys Thr Ile Arg  
                   35                  40                  45  
 Gln Lys Phe Pro Leu Leu Thr Thr Arg Arg Leu Gly Thr Arg Gly His  
                   50                  55                  60  
 Ser Lys Tyr His Tyr Tyr Gly Ile Gly Ile Lys Glu  
                   65                  70                  75

<210> 9  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:exemplary RFX B  
           domain

<400> 9  
 Lys Val Asp Thr Leu Ile Met Met Tyr Lys Thr His Cys Gln Cys Ile  
           1                  5                  10                  15  
 Leu Asp Asn Ala Ile Asn Gly Asn Phe Glu Glu Ile Gln His Phe Leu  
                   20                  25                  30  
 Leu His Phe Trp  
                   35

<210> 10  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:exemplary RFX C  
           domain

<400> 10  
 Leu Tyr Lys Val Leu Thr Asp Val Leu Ile Pro Ala Thr Met Gln Glu  
           1                  5                  10                  15  
 Met Pro Glu Ser Leu Leu Ala Asp Ile Arg Asn Phe Ala Lys Asn Trp  
                   20                  25                  30  
 Glu Gln Trp Val Val Ser Ser Leu  
                   35                  40

<210> 11  
 <211> 179  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:exemplary RFX  
           dimerization domain

<400> 11  
 Arg Phe Val Ser Ser Leu Lys Arg Gln Thr Ser Phe Leu His Leu Ala  
 1 5 10 15  
 Gln Ile Ala Arg Pro Ala Leu Phe Asp Gln His Val Val Asn Ser Met  
 20 25 30  
 Val Ser Asp Ile Glu Arg Val Asp Leu Asn Ser Ile Gly Ser Gln Ala  
 35 40 45  
 Leu Leu Thr Ile Ser Gly Ser Thr Asp Thr Glu Ser Gly Ile Tyr Thr  
 50 55 60  
 Glu His Asp Ser Ile Thr Val Phe Gln Glu Leu Lys Asp Leu Leu Lys  
 65 70 75 80  
 Lys Asn Ala Thr Val Glu Ala Phe Ile Glu Trp Leu Asp Thr Val Val  
 85 90 95  
 Glu Gln Arg Val Ile Lys Thr Ser Lys Gln Asn Gly Arg Ser Leu Lys  
 100 105 110  
 Lys Arg Ala Gln Asp Phe Leu Leu Lys Trp Ser Phe Phe Gly Ala Arg  
 115 120 125  
 Val Met His Asn Leu Thr Leu Asn Asn Ala Ser Ser Phe Gly Ser Phe  
 130 135 140  
 His Leu Ile Arg Met Leu Leu Asp Glu Tyr Ile Leu Leu Ala Met Glu  
 145 150 155 160  
 Thr Gln Phe Asn Asn Asp Lys Glu Gln Glu Leu Gln Asn Leu Leu Asp  
 165 170 175  
 Lys Tyr Met

<210> 12  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX4 DNA  
 binding domain

<400> 12  
 Thr Leu Gln Trp Leu Glu Glu Asn Tyr Glu Ile Ala Glu Gly Val Cys  
 1 5 10 15  
 Ile Pro Arg Ser Ala Leu Tyr Met His Tyr Leu Asp Phe Cys Glu Lys  
 20 25 30  
 Asn Asp Thr Gln Pro Val Asn Ala Ala Ser Phe Gly Lys Ile Ile Arg  
 35 40 45  
 Gln Gln Phe Pro Gln Leu Thr Thr Arg Arg Leu Gly Thr Arg Gly Gln  
 50 55 60  
 Ser Lys Tyr His Tyr Tyr Gly Ile Ala Val Lys Glu  
 65 70 75

<210> 13  
 <211> 77  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX5 DNA  
 binding domain

<400> 13  
 Ala Tyr Arg Trp Ile Arg Asn His Leu Glu Glu His Thr Asp Thr Cys  
 1 5 10 15  
 Leu Pro Lys Gln Ser Val Tyr Asp Ala Tyr Arg Lys Tyr Cys Glu Ser  
 20 25 30  
 Leu Ala Cys Cys Arg Pro Leu Ser Thr Ala Asn Phe Gly Lys Ile Ile  
 35 40 45  
 Arg Glu Ile Phe Pro Asp Ile Lys Ala Arg Arg Leu Gly Gly Arg Gly  
 50 55 60  
 Gln Ser Lys Tyr Cys Tyr Ser Gly Ile Arg Arg Lys Thr  
 65 70 75

<210> 14  
 <211> 75  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:C. elegans RFX  
 protein daf-19 DNA binding domain

<400> 14  
 Thr Val Asn Trp Leu Phe Glu Asn Tyr Glu Ile Gly Glu Gly Ser Leu  
 1 5 10 15  
 Pro Arg Cys Glu Leu Tyr Asp His Tyr Lys Lys His Cys Ala Glu His  
 20 25 30  
 Arg Met Asp Pro Val Asn Ala Ala Ser Phe Gly Lys Leu Ile Arg Ser  
 35 40 45  
 Val Phe His Asn Leu Lys Thr Arg Arg Leu Gly Thr Arg Gly Asn Ser  
 50 55 60  
 Lys Tyr His Tyr Tyr Gly Ile Arg Leu Lys Asp  
 65 70 75

<210> 15  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX3 DNA  
 binding domain

<400> 15  
 His Leu Gln Trp Leu Leu Asp Asn Tyr Glu Thr Ala Glu Gly Val Ser  
     1                    5                    10                    15  
 Leu Pro Arg Ser Thr Leu Tyr Asn His Tyr Leu Arg His Cys Gln Glu  
           20                    25                    30  
 His Lys Leu Asp Pro Val Asn Ala Ala Ser Phe Gly Lys Leu Ile Arg  
           35                    40                    45  
 Ser Ile Phe Met Gly Leu Arg Thr Arg Arg Leu Gly Thr Arg Gly Asn  
           50                    55                    60  
 Ser Lys Tyr His Tyr Tyr Gly Ile Arg Val Lys Pro  
     65                    70                    75

<210> 16  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX2 DNA  
         binding domain

<400> 16  
 His Leu Gln Trp Leu Leu Asp Asn Tyr Glu Thr Ala Glu Gly Val Ser  
     1                    5                    10                    15  
 Leu Pro Arg Ser Ser Leu Tyr Asn His Tyr Leu Arg His Cys Gln Glu  
           20                    25                    30  
 His Lys Leu Asp Pro Val Asn Ala Ala Ser Phe Gly Lys Leu Ile Arg  
           35                    40                    45  
 Ser Val Phe Met Gly Leu Arg Thr Arg Arg Leu Gly Thr Arg Gly Asn  
           50                    55                    60  
 Ser Lys Tyr His Tyr Tyr Gly Ile Arg Leu Lys Pro  
     65                    70                    75

<210> 17  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX1 DNA  
         binding domain

<400> 17  
 Thr Val Gln Trp Leu Leu Asp Asn Tyr Glu Thr Ala Glu Gly Val Ser  
     1                    5                    10                    15  
 Leu Pro Arg Ser Thr Leu Tyr Cys His Tyr Leu Leu His Cys Gln Glu  
           20                    25                    30  
 Gln Lys Leu Glu Pro Val Asn Ala Ala Ser Phe Gly Lys Leu Ile Arg  
           35                    40                    45

Ser Val Phe Met Gly Leu Arg Thr Arg Arg Leu Gly Thr Arg Gly Asn  
 50 55 60

Ser Lys Tyr His Tyr Tyr Gly Leu Arg Ile Lys Ala  
 65 70 75

<210> 18  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX DNA binding  
 domain consensus sequence

<400> 18  
 Thr Leu Gln Trp Leu  
 1 5

<210> 19  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX DNA binding  
 domain consensus sequence

<400> 19  
 Ala Glu Gly Val Ser Leu Pro Arg Ser  
 1 5

<210> 20  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX DNA binding  
 domain consensus sequence

<400> 20  
 Pro Val Asn Ala Ala Ser Phe Gly Lys Leu Ile Arg Ser  
 1 5 10

<210> 21  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX DNA binding  
 domain consensus sequence

<400> 21  
 Thr Arg Arg Leu Gly Thr Arg Gly Asn Ser Lys Tyr His Tyr Tyr Gly  
 1 5 10 15

Ile Arg

<210> 22  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:C. elegans RFX  
 protein daf-19 B domain

<400> 22  
 Glu Leu Asn Ser Leu Ile Asp Ile Tyr Glu Ile Leu Cys Arg Glu Ile  
 1 5 10 15

Leu Ala Leu Ile Lys Asn Ile Asp Phe Ala Ser Val Glu Asp Thr Trp  
 20 25 30

Ser Lys Phe Trp  
 35

<210> 23  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX1 B domain

<400> 23  
 Asp Ile Lys Ala Phe Gln Val Leu Tyr Arg Glu His Cys Glu Ala Ile  
 1 5 10 15

Val Asp Val Met Val Asn Leu Gln Phe Thr Leu Val Glu Thr Leu Trp  
 20 25 30

Lys Thr Phe Trp  
 35

<210> 24  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX2 B domain

<400> 24  
 Asp Val Lys Ala Leu Gln Leu Val Tyr Arg Arg His Cys Glu Ala Thr  
 1 5 10 15



Val Asp Val Val Met Asn Leu Gln Phe His Tyr Ile Glu Lys Leu Trp  
                   20                  25                  30

Leu Ser Phe Trp  
                   35

<210> 25  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX4 B domain

<400> 25  
 Lys Val Ser Thr Phe Ile Met Met Tyr Arg Thr His Cys Gln Arg Ile  
   1                  5                  10                  15

Leu Asp Thr Val Ile Arg Ala Asn Phe Asp Glu Val Gln Ser Phe Leu  
                   20                  25                  30

Leu His Phe Trp  
                   35

<210> 26  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX3 B domain

<400> 26  
 Asp Ile Lys Ser Leu Gln Ser Leu Tyr Arg Glu His Cys Glu Ala Ile  
   1                  5                  10                  15

Leu Asp Val Val Val Asn Leu Gln Phe Ser Leu Ile Glu Lys Leu Trp  
                   20                  25                  30

Gln Thr Phe Trp  
                   35

<210> 27  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX4 C domain

<400> 27  
 Leu Tyr Lys Ala Ile Ser Gly Val Leu Met Pro Thr Val Leu Gln Ala  
   1                  5                  10                  15

Leu Pro Asp Ser Leu Thr Gln Val Ile Arg Lys Phe Ala Lys Gln Leu  
                   20                  25                  30

Asp Glu Trp Leu Lys Val Ala Leu  
           35                  40

<210> 28  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX1 C domain

<400> 28  
 Leu Tyr Gln Gly Leu Val Glu Ile Leu Ile Pro Asp Val Leu Arg Pro  
   1                  5                  10                  15

Ile Pro Ser Ala Leu Thr Gln Ala Ile Arg Asn Phe Ala Lys Ser Leu  
                   20                  25                  30

Glu Ser Trp Leu Thr His Ala Met  
           35                  40

<210> 29  
 <211> 41  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:C. elegans RFX  
           protein daf-19 C domain

<400> 29  
 Leu Tyr Gln Thr Ile Val Asp Thr Leu Ile Pro Asn Val Leu Leu Ser  
   1                  5                  10                  15

Glu Leu Ser Thr Gly Met Thr Gln Thr Cys Arg Thr Phe Ala Lys Asn  
                   20                  25                  30

Ile Asp Val Tyr Leu Arg Lys Ser Leu  
           35                  40

<210> 30  
 <211> 174  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX4  
           dimerization domain

<400> 30  
 Arg Phe Ser Gln Ile Leu Arg Arg Gln Thr Ser Leu Asn His Leu Cys  
   1                  5                  10                  15

Gln Ala Ser Arg Thr Val Ile His Ser Ala Asp Ile Thr Phe Gln Met  
                   20                  25                  30

Leu Glu Asp Trp Arg Asn Val Asp Leu Asn Ser Ile Thr Lys Gln Thr  
                   35                                  40                                  45  
 Leu Tyr Thr Met Glu Asp Ser Arg Asp Glu His Arg Lys Leu Ile Thr  
                   50                                  55                                  60  
 Gln Leu Tyr Gln Glu Phe Asp His Leu Leu Glu Glu Gln Ser Pro Ile  
                   65                                  70                                  75                                  80  
 Glu Ser Tyr Ile Glu Trp Leu Asp Thr Met Val Asp Arg Cys Val Val  
                                   85                                  90                                  95  
 Lys Val Ala Ala Lys Arg Gln Gly Ser Leu Lys Lys Val Ala Gln Gln  
                                   100                                  105                                  110  
 Phe Leu Leu Met Trp Ser Cys Phe Gly Thr Arg Val Ile Arg Asp Met  
                   115                                  120                                  125  
 Thr Leu His Ser Ala Pro Ser Phe Gly Ser Phe His Leu Ile His Leu  
                   130                                  135                                  140  
 Met Phe Asp Asp Tyr Val Leu Tyr Leu Leu Glu Ser Leu His Cys Gln  
                   145                                  150                                  155                                  160  
 Glu Arg Ala Asn Glu Leu Met Arg Ala Met Lys Gly Glu Gly  
                                   165                                  170

<210> 31  
 <211> 170  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:C. elegans RFX  
           protein daf-19 dimerization domain

<400> 31  
 Tyr Leu Gln Gln Gly Leu Lys Arg Tyr Thr Ser Leu Asn His Leu Ala  
   1                                  5                                  10                                  15  
 His Ala Ser Arg Gly Val Leu Met Lys Pro Glu Gln Val Gln Gln Met  
                   20                                  25                                  30  
 Tyr Gln Asp Tyr Ile Arg Val Asp Ile Asn Thr Val His Gln Gln Ala  
                   35                                  40                                  45  
 Gly Trp Ile Cys Gly Cys Asp Ser Val Met Val His His Val Asn Asn  
                   50                                  55                                  60  
 Ala Phe Lys His Asn Leu Gln Arg Met Ser Ala Met Glu Val Trp Ala  
                   65                                  70                                  75                                  80  
 Glu Trp Leu Glu Ser Ile Val Asp Gln Val Leu Ala Lys Tyr His Asp  
                                   85                                  90                                  95  
 Lys Pro Ala Asn Val Ile Ala Asn Val Gly Lys Gln Phe Leu Leu Asn  
                   100                                  105                                  110  
 Trp Ser Phe Tyr Thr Ser Met Ile Ile Arg Asp Leu Thr Leu Arg Ser  
                   115                                  120                                  125

Ala Met Ser Phe Gly Ser Phe Thr Leu Ile Arg Leu Leu Ala Asp Asp  
 130 135 140

Tyr Met Tyr Tyr Leu Ile Glu Ser Lys Ile Ala Lys Ala Gly Lys Gln  
 145 150 155 160

Gln Leu Ile Thr Val Ile Arg Ala Asp Lys  
 165 170

<210> 32  
 <211> 168  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX3  
 dimerization domain

<400> 32  
 Ala Phe Ala Gln Thr Leu Arg Arg Tyr Thr Ser Leu Asn His Leu Ala  
 1 5 10 15

Gln Ala Ala Arg Ala Val Leu Gln Asn Thr Ser Gln Ile Asn Gln Met  
 20 25 30

Leu Ser Asp Leu Asn Arg Val Asp Phe Ala Asn Val Gln Glu Gln Ala  
 35 40 45

Ser Trp Val Cys Gln Cys Asp Asp Asn Met Val Gln Arg Leu Glu Thr  
 50 55 60

Asp Phe Lys Met Thr Leu Gln Gln Gln Ser Thr Leu Glu Gln Trp Ala  
 65 70 75 80

Ala Trp Leu Asp Asn Val Met Met Gln Ala Leu Lys Pro Tyr Glu Gly  
 85 90 95

Arg Pro Ser Phe Pro Lys Ala Ala Arg Gln Phe Leu Leu Lys Trp Ser  
 100 105 110

Phe Tyr Ser Ser Met Val Ile Arg Asp Leu Thr Leu Arg Ser Ala Ala  
 115 120 125

Ser Phe Gly Ser Phe His Leu Ile Arg Leu Leu Tyr Asp Glu Tyr Met  
 130 135 140

Phe Tyr Leu Val Glu His Arg Val Ala Gln Ala Thr Gly Glu Thr Pro  
 145 150 155 160

Ile Ala Val Met Gly Glu Val Arg  
 165

<210> 33  
 <211> 168  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:RFX1  
dimerization domain

<400> 33

Ala Phe Ala Gln Thr Leu Arg Arg Tyr Thr Ser Leu Asn His Leu Ala  
1 5 10 15

Gln Ala Ala Arg Ala Val Leu Gln Asn Thr Ala Gln Ile Asn Gln Met  
20 25 30

Leu Ser Asp Leu Asn Arg Val Asp Phe Ala Asn Val Gln Glu Gln Ala  
35 40 45

Ser Trp Val Cys Arg Cys Glu Asp Arg Val Val Gln Arg Leu Glu Gln  
50 55 60

Asp Phe Lys Val Thr Leu Gln Gln Gln Asn Ser Leu Glu Gln Trp Ala  
65 70 75 80

Ala Trp Leu Asp Gly Val Val Ser Gln Val Leu Lys Pro Tyr Gln Gly  
85 90 95

Ser Ala Gly Phe Pro Lys Ala Ala Lys Leu Phe Leu Leu Lys Trp Ser  
100 105 110

Phe Tyr Ser Ser Met Val Ile Arg Asp Leu Thr Leu Arg Ser Ala Ala  
115 120 125

Ser Phe Gly Ser Phe His Leu Ile Arg Leu Leu Tyr Asp Glu Tyr Met  
130 135 140

Tyr Tyr Leu Ile Glu His Arg Val Ala Gln Ala Lys Gly Glu Thr Pro  
145 150 155 160

Ile Ala Val Met Gly Glu Phe Ala  
165

<210> 34

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:RFX  
dimerization domain consensus sequence

<400> 34

Leu Arg Arg Tyr Thr Ser Leu Asn His Leu Ala Gln Ala Ala Arg  
1 5 10 15

<210> 35

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:RFX  
dimerization domain consensus sequence

<400> 35  
Asn Gln Met Leu Ser Asp  
1 5

<210> 36  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:RFX  
dimerization domain consensus sequence

<400> 36  
Trp Ala Glu Trp Leu Asp  
1 5

<210> 37  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:RFX  
dimerization domain consensus sequence

<400> 37  
Gln Phe Leu Leu Lys Trp Ser Phe Tyr  
1 5

<210> 38  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:RFX  
dimerization domain consensus sequence

<400> 38  
Ser Met Val Ile Arg Asp Leu Thr Leu Arg Ser Ala  
1 5 10

<210> 39  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:RFX  
dimerization domain consensus sequence

<400> 39  
Ser Phe Gly Ser Phe His Leu Ile Arg Leu Leu  
1 5 10

<210> 40  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:RFX  
 dimerization domain consensus sequence

<400> 40  
 Asp Glu Tyr Met  
 1

<210> 41  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:hexahistidine  
 (His) affinity tag

<400> 41  
 His His His His His His  
 1 5

<210> 42  
 <211> 200  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:poly-Gly  
 flexible linker

<220>  
 <221> MOD\_RES  
 <222> (6)..(200)  
 <223> Gly residues from position 6 to 200 may be present  
 or absent

<400> 42  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 1 5 10 15  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 20 25 30  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 35 40 45  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 50 55 60  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 65 70 75 80  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 85 90 95

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 100 105 110  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 115 120 125  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 130 135 140  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 145 150 155 160  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 165 170 175  
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 180 185 190  
 Gly Gly Gly Gly Gly Gly Gly Gly  
 195 200